RAW SEQUENCE LISTING
ERROR REPORT

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Application Serial Number: _10/676, 248_

Source: _Oipe_

Date Processed by STIC: _10-27-03_

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2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY
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1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
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   U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
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Revised 10/08/03

RAW SEQUENCE LISTING
PATENT APPLICATION: **US/10/676,248**

DATE: 10/27/2003
TIME: 10:44:24

Input Set : **E:\Us3302~1.txt**
Output Set: **N:\CRF4\10272003\J676248.raw**

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 3 <110> APPLICANT: The Children's Mercy Hospital
 4       Rogan, Peter
 5       Knoll, Joan
 7 <120> TITLE OF INVENTION: SUBTELOMERIC DNA PROBES AND METHOD OF PRODUCING SAME
 9 <130> FILE REFERENCE: 33026-PCT
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Does Not Comply
Corrected Diskette Needed
P 6-8

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25 <211> LENGTH: 1820
26 <212> TYPE: DNA
27 <213> ORGANISM: Homo sapiens
29 <400> SEQUENCE: 1
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34 ttcattttgt aagaacatga cagagcacct gccatggcat tcacgcaggt agggctggag     180
36 gcagccaccg acgtttgtta attgcagagt tttaactcaa gggggacaga tgatctcagg     240
38 acagaatgac aagctgagtg acagcaggag ggacgtcacc gtacaattct ctccactttt     300
40 ctgtaagttt gaaaatcctc acagaacacc cagaggcaca cagtgtcctg aagtggaaac     360
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46 gtcagggaga aacaaacggg ggatctgcgt ggagtcggcc tcccccggct ccccggggcg     540
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50 ggacacttgc tggttctagg gagaggaagg tggaattagg aattcccttg ggattgggag     660
52 cgtcaggaaa atatcctttt tgtttttaaga ggtgtgtatg taaagtctgt gggacaacgg     720
54 gaagggatgt cttttgacta attacctaaa ccaaaattgg agcaactatg ataacagttc     780
56 aatgctttaa gacaaagtgg ggggtgtgcg ggcaagcact ccctcatctt ggccgaaatt     840
58 tttctgaaga aacccgctaa gtctcaatca gcagcatcag gactgacagg aagaagcagc     900
60 cgccacccgc gccccaaccc tgccccgcct cggcgaggtc agaccctcac gcacagttcc     960
62 ctgcctccca ccactacctc cggccttctc agccctgtcc acggctcctg cggtgggctc    1020
64 ggccttcgat gtcagggacc tccccgccat ttcctctcag ctcgccagcg agggtgcctc    1080
66 gggagggagc ctccagtggt gattggagca accgccgctg ggggcaggac tccaggcagc    1140
68 gcgcctgcgc aatgcactcc tgcgcgcgcc tggagatgtg aggtaattct ccggcaggcc    1200
70 tgcgtggcac tagtgcgcat gcgtaaaggc gcgagggcta caaacgcggc gggaagcccg    1260
72 ccaggccac gtgcggccgt ccaggcttgc gattggcccg ctgccgggtg cccccgcgca    1320
74 tgtgcgctgg cttccgaggg gaccggccct ggttctggag gccctcccca ccaacgagca    1380
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RAW SEQUENCE LISTING   DATE: 10/27/2003
PATENT APPLICATION: **US/10/676,248**   TIME: 10:44:24

Input Set : **E:\Us3302~1.txt**
Output Set: **N:\CRF4\10272003\J676248.raw**

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 80 gcgggagtgc acgggcccca gcgagtgaaa tctgcggcag cccccgctgg gcccgctgtt 1560
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 86 ggccaccgtg gaggcccgga gggccctggg aggaggggagg aggagcagag gcttttcggga 1740
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 90 cagggaagaa actttaccgt                                          1820
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 96 <213> ORGANISM: Homo sapiens
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101 <222> LOCATION: (1704)..(1803)
102 <223> OTHER INFORMATION: n is a, c, t, or g
104 <400> SEQUENCE: 2
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107 cggagaagca ggctctggct tccagctttg tttctaggaa cacatttaaa ggaaacttcc  120
109 taagtgagag ctgcacagaa ttttatctcc gcagttctga tctttcatgt atgtgactga  180
111 gagaggtcaa gtgaggggcc aaaaaaaaaa aaaaaaaaac acaaggccca agaagcaaag  240
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115 gtgtagaaac gtgctcttgc atgtgctggg gatgcgtcca gggctgagga ggaggagggc  360
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119 ttcaggaagg ggggcgcctc atgggacagg acaggtgata aggggagtga gggtgtcctt  480
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125 ttcctcatag aagcaggaag ctcagtgcca gagagaatgc ggcggaagga ggacgcatga  660
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131 gccagtgcgg aggggcacag tggcagggag ttaagagcca gccaggggcgg gctcattctg  840
133 aacacaatga ggcaaaggtg tcaagttcca ttgtttgctt tctgatctga aataaacaca  900
135 tgatctcttg gctactgtgt cctgatgctg ttgtttgtac actacttcct gtggaggtct  960
137 ctgccatttt cctggtgaag gacttctcag taataaaagc aggaacgtgg aaagcaaact 1020
139 caagagccaa gaaataaaga aactcagtcc atacacatta tgtgtttaaa tcttttcaga 1080
141 attatttgag gacaatctat tatacttccc taaggaagtg ccattttgta attgtgagct 1140
143 ttcatggact catttgagcc ataaagctta cctcacgcta tttcccaggc aatcataact 1200
145 cactcagctc aaaccggtgt gtggcagatg gagggcatgt gagcagttct gatggtgtca 1260
147 aggcaagcca aggatacata acagaaaagt aacctggatc tcggaggaca ctcaactcac 1320
149 ctctccaagg tgtgagtccc ccagcggtcc ttttgtttct gggttggcaa ttataatccg 1380
151 aacccctgga agtatctatt tgggagagga aaagtctctt gtcaatggga ggaatacagg 1440
153 gagagactac acacaagcca acctcaatct catctttatg ccatttcctt tcaagactgt 1500
155 ttagaaagca attaaatcaa aactatatgc cacatagtta tgacccatta tacaaccaca 1560
157 gcctcacaat cacagcctca caatcacatt ctcactgtaa ctgtcaatat tgtatgctgt 1620
159 tatggtgacc tcaaaattaa acattttgat tgtcagtcat acaggtttct ttagacccgg 1680
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W--> 161 **agtgaggctt gcaacgctag ttcnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn** **1740**
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165 nnnaggaaac actgggaatt ttagttgttt aatgtattat ttaagatatt tacatagact 1860
167 aatattacat ctcacatcat ggcacacaca tggatggagg gtgatgcttg cagtaatcgc 1920
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RAW SEQUENCE LISTING
PATENT APPLICATION: **US/10/676,248**

DATE: 10/27/2003
TIME: 10:44:24

Input Set : **E:\Us3302~1.txt**
Output Set: **N:\CRF4\10272003\J676248.raw**

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173 attgtgggtc aa                                                    2052
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177 <211> LENGTH: 2527
178 <212> TYPE: DNA
179 <213> ORGANISM: Homo sapiens
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186 ttacaatgag gaaaagataa acgggaagat agtctgtaag aaaaaatatt tttctcctta  180
188 ctctcatttt acatgaagga tgcagtggaa ttctgtttct tgtaaatgtg ctaattttct  240
190 tactcaggct ttaatgggaa acctggtgag tgagcagggc cctctgcaga gagcaggctt  300
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194 agtcacgggc accatgagtt ttgcctctgc cacgccctct ccacccccct gcccaccctg  420
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202 tttattacct gtgtaaactt ttagaattta actatgttac ctaaattctg aaaaggcttt  660
204 ctgctttcct atcagtttct ctcaaagatc acagtggact tcgtggattg acacatgaaa  720
206 ggtagcaatt gttgttaata ataataaagt catagctaat atacagttga gaactgaaag  780
208 ggcaaataat tgtatagagt ctcattccca aacctttat tcatggttaa agtcctggct  840
210 agtgtccaca aaaacctact tttccagctc cctccaccct ctcaagctgt tgccctcact  900
212 gttcagtaac taaatagccc tgaactgttg acgttgttat cctgaaatcc ataaatacaa  960
214 gaccattcag taaaaactcc agcaaacaga aaaatcagaa atacaagtgg cttgctaatt 1020
216 taagaattta cttcaaccac tggaaagtaa taagttaaaa tgaataaatt aaaaacacaa 1080
218 gatgttttct ttttttcgta tctgcagcca tgtctgggga caaacaaatt cctttgaaag 1140
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222 aggtaatctc taaaagttga gaggaaatat ctttttatct tgattccaat gatgaaatac 1260
224 aacattattt cattattttt gttacatttt atcctacttg aatttaacat taagtttgga 1320
226 ataaagtctc taagacagga tattacaagt aacagaacac aagaaaaatc cttcattaag 1380
228 ggtcactacc aatctgttaa aacatgagtg ggtgtgggta cacttccagc ccttctgtca 1440
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244 ggtaactagg agatgatgtt tattaaggta agaaacattg aacactgaag actccttcct 1920
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RAW SEQUENCE LISTING   DATE: 10/27/2003
PATENT APPLICATION: **US/10/676,248**   TIME: 10:44:24

Input Set : **E:\Us3302~1.txt**
Output Set: **N:\CRF4\10272003\J676248.raw**

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279 gcctgtgatg agctggagct gcatcagcgt ttcctacgag aagggagatt ttggaaatct   180
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287 ttgtaaagtg ctctgcaaaa ctaaaccaaa agcagttcaa atgaatacat agatgtaaca   420
289 atcaatgacc ttgaccctgc cagtaccaag agagttaagt acaagtgctc ctctctgaag   480
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293 agtggatgga aggatgcaaa aggtagaaat gtattcactt ctcacctgtg ggtccactat   600
295 gagtgttttc agcagagaag tattttctag tgtctggaat aatatattac ttttataatg   660
297 cccacagcta aaggtcactc aagaaccaag agcaaagaaa ggacgacgta atcaaagtgt   720
299 ggagcccaaa aaggaagtaa gttgcccacc tcgcagtatc caggtggcaa atgaaacagg   780
301 aaatattttc aaagtatttt gtattttcaa agtatttcaa agacagtcac tcttggtgga   840
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331 ctccgtgtca actcagacaa agaagttaag tgcctcttca ccaagaatgc tgcatcggag  1740
333 cacccagacc acaaacgacg gcgtgtgtca gagcatgtgc catgacaaat acaccaagat  1800
335 cttcaatgac ttcaaagacc ggatgaagtc ggaccacaag cgggagacag agcgtgttgt  1860
337 ccgagaagct ctggagaagg taatgcttgt cgccactgtg ggtgccctgc tgcagccggc  1920
339 actcctgtca tggttaggct cctttcactc atgcatcaac ccagtagcag cttttacatg  1980
341 tagccatata atgacaccag tatcttttac agcatttcaa gtaataatga tactttcctc  2040
343 acctaaattt tttacacatg taatgaaggg gaaaaaggt acctcatgca agttgtgtta   2100
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349 tgtagccaac atgcagggtg agatggacag aaaatgtaag caagtaaagg aaaagtgtaa  2280
351 ggaagaattt gtagaagaaa tcaagaagct ggcaacacag cacaagcaac tgatttctca  2340
353 gaccaagaag aagcagtggg taaataccag tcttttttag acccttattt ctgaaaatgt  2400
355 accacaggta tgatgcccgt taattcagaa ggtagctgtg cacatgcag aagatgtttc   2460
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365 ggtaacatcc aaatggtgaa attataaatg taattatcac aataaatagt ttcagatttc 2760
367 cctgcactta acatttatac attagatttt gttaaagaaa tcagttactt ttactttata 2820
369 gtagtgacat ctcattggtc tctaactacc ctccctcata cctgactagt atcatttgtc 2880
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373 ggtccaagtg ctcgtcctac agccgccaca gtgctcagtg aattagggaa aagttttgct 3000
375 cccgaaagct cataacttgg tttcagtttt aataaatgac tatataaagt tttgtgataa 3060
377 actaattctt cattttatca agcctatatt atataaatac acataagctt ttcatgaaag 3120
379 aaatattttt aaatctgtga caaagatttg gcaagaagga aaatggaaac ttcgaataga 3180
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386 <212> TYPE: DNA
387 <213> ORGANISM: Homo sapiens
390 <220> FEATURE:
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392 <222> LOCATION: (405)..(504)
393 <223> OTHER INFORMATION: n is a, c, t, or g
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400 ccagagctgc taaggggggcg gccaccaaaa ccccaaccgt caggccctgc gaaccctttc  180
402 aaggcagcct cggcacacgg acaaccgaca agggtcctga gcaaggagga cgcacagctc  240
404 gagctggctt tgacattcgt gctcagtgta cagacacgac tgtacacaca aaattaaaca  300
406 ggaaaaactc aagtctgggt gacacaaaat acatattcac accccccgca cctctgaaaa  360
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414 ctcctattca agagagttat tgtaagtatg aaataaatcc gtaaatggca tcctcccccct  600
416 ccactaatgt caggatttta ttcggggtta tttatatatg tgccaacaga aaggtcatga  660
418 aaatgtactc tctttctaat acaatataga tgaacatgaa tagtgctaac tttttcctat  720
420 ataaatacaa aacttaaaat gattgcacaa ttacttatgt tacataaagt tatcttgcat  780
422 tttgctttcc tgtccaagct ttatgcatta ggaaaacaat gcaggacaga taaatgtact  840
424 gttccgttat tgatctctgt gtagatgaca gaaacacaaa cacaatccat gtatatacaa  900
426 agacatacac acatccaaag agtacaaagt cagttgaaat tttatcaaaa ctggtcagat  960
428 gattattccc tcctagttac ttggagctaa ggactactta atttaccatg aagatatacg 1020
430 tatcaaaatg tccttggttt aaatggaggg aaatactatt attcttacat aatagcaatt 1080
432 attaaaaaat gaaacacaac actgttaact gaactgtaaa atgaattgag cttagggtcc 1140
434 agacccagaa atcagggtct ccaggaaaaa taaaagtgag cggctaaatt caaacctacc 1200
436 ttcttaaaca ccagtatcaa ataaagttaa catcacctaa gatcttctga acactgaaca 1260
438 cttcagaaca ctgaatccac ccaacaaaaa atcaaattta ggatctttca agtagaccca 1320
440 gtggaatgac aggcattgaa aatattttac attctggttc gttactgtct gtggtcgtgg 1380
442 ggaaatattc acgttaaaaa gattttcata taaaggcagt ttgtaagctt caggtgacgt 1440
444 tagattaaac ccaggctttg ttttggagga ctgttttaac ttcacccccat cacagatgtg 1500
446 ccttcttaga aaggagtccc tgtgggctca cagggcactg agctgccaag ggagctgctt 1560
448 accttgaggg actctgtttg cgagcccagc cccttggtgc acagctccat cacggagtag 1620
450 gagcaaaacg tgtctcggac tttgtactga ctcacggcaa gaagccacaa ggcggggttg 1680
```

```
<210> SEQ ID NO 176
<211> LENGTH: 30
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: :
<400> SEQUENCE: 176
      gtgtttgtca ccccactcct gctcctgccc                30
```

mandatory response.
see Page 9 of error
summary report.

```
<210> SEQ ID NO 206
<211> LENGTH: 31
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: :
<400> SEQUENCE: 206
        gggaaatagt agcqtaagct gtcaactcca g                    31
```

mandatory response
see page 9 of error summary report.

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 10/27/2003
PATENT APPLICATION: US/10/676,248   TIME: 10:44:25

Input Set : **E:\Us3302~1.txt**
Output Set: **N:\CRF4\10272003\J676248.raw**

Please_Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:2; N Pos. 1704,1705,1706,1707,1708,1709,1710,1711,1712,1713,1714,1715
Seq#:2; N Pos. 1716,1717,1718,1719,1720,1721,1722,1723,1724,1725,1726,1727
Seq#:2; N Pos. 1728,1729,1730,1731,1732,1733,1734,1735,1736,1737,1738,1739
Seq#:2; N Pos. 1740,1741,1742,1743,1744,1745,1746,1747,1748,1749,1750,1751
Seq#:2; N Pos. 1752,1753,1754,1755,1756,1757,1758,1759,1760,1761,1762,1763
Seq#:2; N Pos. 1764,1765,1766,1767,1768,1769,1770,1771,1772,1773,1774,1775
Seq#:2; N Pos. 1776,1777,1778,1779,1780,1781,1782,1783,1784,1785,1786,1787
Seq#:2; N Pos. 1788,1789,1790,1791,1792,1793,1794,1795,1796,1797,1798,1799
Seq#:2; N Pos. 1800,1801,1802,1803
Seq#:5; N Pos. 405,406,407,408,409,410,411,412,413,414,415,416,417,418,419
Seq#:5; N Pos. 420,421,422,423,424,425,426,427,428,429,430,431,432,433,434
Seq#:5; N Pos. 435,436,437,438,439,440,441,442,443,444,445,446,447,448,449
Seq#:5; N Pos. 450,451,452,453,454,455,456,457,458,459,460,461,462,463,464
Seq#:5; N Pos. 465,466,467,468,469,470,471,472,473,474,475,476,477,478,479
Seq#:5; N Pos. 480,481,482,483,484,485,486,487,488,489,490,491,492,493,494
Seq#:5; N Pos. 495,496,497,498,499,500,501,502,503,504
Seq#:19; N Pos. 1774,1775,1776,1777,1778,1779,1780,1781,1782,1783,1784,1785
Seq#:19; N Pos. 1786,1787,1788,1789,1790,1791,1792,1793,1794,1795,1796,1797
Seq#:19; N Pos. 1798,1799,1800,1801,1802,1803,1804,1805,1806,1807,1808,1809
Seq#:19; N Pos. 1810,1811,1812,1813,1814,1815,1816,1817,1818,1819,1820,1821
Seq#:19; N Pos. 1822,1823,1824,1825,1826,1827,1828,1829,1830,1831,1832,1833
Seq#:19; N Pos. 1834,1835,1836,1837,1838,1839,1840,1841,1842,1843,1844,1845
Seq#:19; N Pos. 1846,1847,1848,1849,1850,1851,1852,1853,1854,1855,1856,1857
Seq#:19; N Pos. 1858,1859,1860,1861,1862,1863,1864,1865,1866,1867,1868,1869
Seq#:19; N Pos. 1870,1871,1872,1873
Seq#:67; N Pos. 1473,1474,1475,1476,1477,1478,1479,1480,1481,1482,1483,1484
Seq#:67; N Pos. 1485,1486,1487,1488,1489,1490,1491,1492,1493,1494,1495,1496
Seq#:67; N Pos. 1497,1498,1499,1500,1501,1502,1503,1504,1505,1506,1507,1508
Seq#:67; N Pos. 1509,1510,1511,1512,1513,1514,1515,1516,1517,1518,1519,1520
Seq#:67; N Pos. 1521,1522,1523,1524,1525,1526,1527,1528,1529,1530,1531,1532
Seq#:67; N Pos. 1533,1534,1535,1536,1537,1538,1539,1540,1541,1542,1543,1544
Seq#:67; N Pos. 1545,1546,1547,1548,1549,1550,1551,1552,1553,1554,1555,1556
Seq#:67; N Pos. 1557,1558,1559,1560,1561,1562,1563,1564,1565,1566,1567,1568
Seq#:67; N Pos. 1569,1570,1571,1572
Seq#:245; N Pos. 1843

Invalid <213> Response:
Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100,101,102,103,104
Seq#:105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122
Seq#:123,124,125,126,127,128,129,130,131,132,133,134,135,136,137,138,139,140
Seq#:141,142,144,145,146,147,148,149,150,151,152,153,154,155,156,157,158,159
Seq#:160,161,162,163,164,165,166,167,168,169,170,171,172,173,174,175,177,178
Seq#:179,180,181,182,183,184,185,186,187,188,189,190,191,192,193,194,195,196

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 10/27/2003
PATENT APPLICATION: **US/10/676,248**   TIME: 10:44:25

Input Set : **E:\Us3302~1.txt**
Output Set: **N:\CRF4\10272003\J676248.raw**

Seq#:197,198,199,200,201,202,203,204,205,207,208,209,210,211,212,213,214,215
Seq#:216,217,218,219,220,221,222,223,224,225,226,227,228,229,230,231,232,233
Seq#:234,235,236,237,238,239,240,241,242,243,244

Use of <220> Feature(NEW RULES):
Sequence(s) are missing the <220> Feature and associated headings.
Use of <220> to <223> is MANDATORY if <213> ORGANISM is "Artificial Sequence"
or"Unknown". Please explain source of genetic material in <220> to <223>
section (See "Federal Register," 6/01/98, Vol. 63, No. 104,pp.29631-32)
(Sec.1.823 of new Rules)

Seq#:176,206

VERIFICATION SUMMARY   DATE: 10/27/2003
PATENT APPLICATION: **US/10/676,248**   TIME: 10:44:25

Input Set : **E:\Us3302~1.txt**
Output Set: **N:\CRF4\10272003\J676248.raw**

```
L:11 M:270 C: Current Application Number differs, Replaced Current Application No
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:161 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:1680
M:341 Repeated in SeqNo 2
L:408 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:360
M:341 Repeated in SeqNo=5
L:1740 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:1740
M:341 Repeated in SeqNo=19
L:6473 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:67 after pos.:1440
M:341 Repeated in SeqNo=67
L:8676 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:143
L:9072 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:176
L:9074 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ#:176, <213>
ORGANISM:Artificial Sequence
L:9074 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ#:176, <213>
ORGANISM:Artificial Sequence
L:9074 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:176,Line#:9074
L:9429 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:206
L:9431 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ#:206, <213>
ORGANISM:Artificial Sequence
L:9431 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ#:206, <213>
ORGANISM:Artificial Sequence
L:9431 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:206,Line#:9431
L:9963 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:245 after pos.:1800
```